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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/788,115	02/16/2001	Kevin W. Smith		2612

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MOSER, PATTERSON & SHERIDAN, L.L.P.
3040 POST OAK BOULEVARD, SUITE 1500
HOUSTON, TX 77056-6582

EXAMINER

HAMLIN, DERRICK G

ART UNIT	PAPER NUMBER
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1751

DATE MAILED: 02/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/788,115

Applicant(s)

SMITH ET AL

Examiner

Derrick G. Hamlin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-11 is/are pending in the application.
- 4a) Of the above claim(s) 5 and 12-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to:
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3,5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-4 and 6-11, drawn to a method for heating a fluid, classified in class 252, subclass 73.
- II. Claims 5 and 12-20, drawn to a method for transfer a natural gas through a pipeline, classified in class 239, subclass 128.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions different modes of operation, different functions, and different effects. One invention is drawn to a method for circulating a fluid through a heater, while the other is for transmitting a natural gas in a pipeline.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification and their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Jason Wang on 1/20/2004 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-4

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and 6-11. Affirmation of this election must be made by applicant in replying to this Office action. Claims 5 and 12-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

Claims 1-4 and 6-11 are objected to because of the following informalities: All of the claims are incomplete idiomatic sentences. For example, claim 1 should read, "The method of heat a fluid₁ comprising heating a solution₁ comprising..." Appropriate correction of all the claims is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minks et al. (6059996).

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Minks discloses a low-viscosity, aqueous coolant brines based on inhibited alkali metal acetates and/or formates having improved corrosion protection, wherein the coolant brines contain 0.2 to 5% by weight of alkali metal sulfites or pyrosulfites, in particular 1 to 2.5% by weight of these sulfites. The novel coolant brines result in very low corrosion rates, in particular with steel and cast iron. (abstract) Due to the low viscosity, considerable energy savings can be achieved by recirculation and due to the high water content, advantageous heat technology and refrigeration properties are additionally benefits (col. 1, lines 13-19). The present invention relates to aqueous, low-viscosity coolant brines which contain metal salts of short-chain carboxylic acids, potassium formate, and/or potassium acetate being preferred. As a rule, the salt content is between 20 and 60% by weight, depending on the degree of frostproofing desired. (col. 1, lines 53-58)

The reference fails to teach that the solution is circulated and recirculated through a heating zone. The reference fails to teach the specific heating system.

Although, the reference fails to teach that the solution is circulated and recirculated through a heating zone, the reference does teach that it is advantageous to recirculate the brine solution. Aside from circulating being required in order to recirculate, it is well known to the skilled artisan that when a heating/cooling solution recircuated, it is to transfer heat/cold from one zone to a zone of a different temperature. Additionally, ~~the~~ although the reference fails to teach the specific heating system, the skilled artisan recognizes that a heating solution is required for a line heater. In the

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absence of showing a specific line heater giving rise to superior or unexpected properties, the line heater is a well know generic heating system.

Therefore, in view of Minks disclosure of an aqueous coolant brines comprising 20 and 60% by weight potassium formate, and/or potassium acetate giving a very low corrosion rates, which may be recirculated, the instantly claimed method would have been obvious to one of ordinary skill in the art at the time the invention was made.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick G. Hamlin whose telephone number is (571) 272-1317. The examiner can normally be reached on Monday-Fridays from ~8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta, can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Derrick G. Hamlin

2/6/04

RA


YOGENDRA N. GUPTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700